

1-99. (Cancelled)

100. (New) A crystalline mesoporous silica material being obtained by assembly of nanometer size building units having zeolite framework, said crystalline mesoporous silica material having two or more levels of porosity and structural order, and wherein the internal structure of said nanometer size building units does not give rise to Bragg type diffraction in a powder X-ray diffraction pattern of said crystalline mesoporous silica material.
101. (New) A crystalline mesoporous silica material according to claim 100, wherein said building units are nanoslabs of substantially uniform size having the Silicalite-1 zeolite framework.
102. (New) A crystalline mesoporous silica material according to claim 100, wherein said building units are nanoslabs of substantially uniform size having the Silicalite-1 zeolite framework and wherein said nanoslabs are generated by tetrapropylammonium-ion mediation.
103. (New) A crystalline mesoporous silica material according to claim 100, wherein said building units are nanoslabs of substantially uniform size having the Silicalite-1 zeolite framework and wherein said nanoslabs are linked through their corners, edges or faces following patterns imposed by interaction with a cationic surfactant or triblock copolymer molecule.
104. (New) A crystalline mesoporous silica material according to claim 100, wherein said building units are nanoslabs of substantially uniform size having the Silicalite-1 zeolite framework and wherein said two or more levels of porosity

comprise at least a microporosity inside said nanoslabs and at least a mesoporosity between said nanoslabs.

105. (New) A crystalline mesoporous silica material according to claim 100, wherein said absence of Bragg type diffraction from nanometer size building units manifests itself by the absence of peaks in a powder X-ray diffraction pattern at interplanar spacings below about 1.5 nm.
106. (New) A crystalline mesoporous silica material according to claim 100, wherein said powder X-ray diffraction pattern is performed after removal of said tetrapropylammonium-ion and said cationic surfactant or triblock copolymer molecule.
107. (New) A process for making a crystalline mesoporous silica material, said crystalline mesoporous silica material being obtained by assembly of nanometer size building units having zeolite framework, said crystalline mesoporous silica material having two or more levels of porosity and structural order, wherein said building units are nanoslabs of substantially uniform size having the Silicalite-1 zeolite framework, comprising the steps of (a) generating said nanoslabs having said zeolite framework by tetrapropylammonium-ion mediation and (b) assembling said nanoslabs through interaction with a cationic surfactant or triblock copolymer molecule.
108. (New) A process according to claim 107, further comprising the step of removing said tetrapropylammonium-ion and said cationic surfactant or triblock copolymer molecule.
109. (New) A substantially crystalline mesoporous oxide based material being obtained by assembly of nanometer size building units having zeolite framework,

wherein said assembly proceeds in the presence of one or more amphiphilic non-anionic surfactants, wherein said substantially crystalline mesoporous oxide based material has two or more levels of porosity and structural order, and wherein the internal structure of said nanometer size building units does not give rise to Bragg type diffraction in a powder X-ray diffraction pattern of said substantially crystalline mesoporous oxide based material.

110. (New) A substantially crystalline mesoporous oxide based material according to claim 109, wherein said absence of Bragg type diffraction from nanometer size building units manifests itself by the absence of peaks in a powder X-ray diffraction pattern at interplanar spacings below about 1.5 nm and/or at angles of diffraction above 3 degrees.
111. (New) A substantially crystalline mesoporous oxide based material according to claim 109, wherein said powder X-ray diffraction pattern is performed after removal of said one or more amphiphilic non-anionic surfactants.
112. (New) A substantially crystalline mesoporous oxide based material according to claim 109, wherein said oxide based material comprises one or more oxides selected from the group consisting of silica, germanium oxide and metallic oxides.
113. (New) A substantially crystalline mesoporous oxide based material according to claim 109, wherein said oxide based material comprises one or more metallic oxides selected from the group consisting of alumina, titania, zirconia, ceria, manganese oxide, niobium oxide, tantalum oxide, tungsten oxide, tin oxide, gallium oxide, iron oxide, and hafnium oxide.

114. (New) A substantially crystalline mesoporous oxide based material according to claim 109, wherein the size of said building units ranges from about 1 to 8 nm.
115. (New) A substantially crystalline mesoporous oxide based material according to claim 109, having one or more types of mesopores each with an average size ranging from about 2 to 15 nm.
116. (New) A substantially crystalline mesoporous oxide based material according to claim 109, wherein said nanometer size building units are nanoslabs of substantially uniform size having a zeolite framework.
117. (New) A substantially crystalline mesoporous oxide based material according to claim 109, having mesopore walls with a thickness from about 1 to 4 nm.
118. (New) A process for making a substantially crystalline mesoporous oxide based material being obtained by assembly of nanometer size building units having zeolite framework, wherein said assembly proceeds in the presence of one or more amphiphilic non-anionic surfactants, wherein said substantially crystalline mesoporous oxide based material has two or more levels of porosity and structural order, and wherein the internal structure of said nanometer size building units does not give rise to Bragg type diffraction in a powder X-ray diffraction pattern of said substantially crystalline mesoporous oxide based material, comprising the steps of (a) generating said nanometer size building units having zeolite framework by means of a mediating agent selected from the group consisting of tetraalkylammonium ions, tetraalkylphosphonium ions or gemini (dimeric) tetraalkylammonium ions wherein the alkyl group has from 2 to 4 carbon atoms,

and (b) assembling said nanometer size building units through interaction with said one or more amphiphilic non-anionic substances to yield a mesoporous oxide based material.

119. (New) A pharmaceutical composition comprising a biologically active species and a substantially ordered mesoporous oxide based material, wherein said ordered oxide based material has one or more levels of porosity or structural order, provided that when said ordered oxide based material has a single level of porosity and structural order it is obtained in the absence of an alpha-tocopherol polyethylene glycol ester templating biomolecule.